

Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

SCIENCE:

A WEEKLY NEWSPAPER OF ALL THE ARTS AND SCIENCES.

PUBLISHED BY

N. D. C. HODGES,

47 LAFAYETTE PLACE, NEW YORK.

Subscriptions.—United States and Canada \$3.50 a year.
Great Britain and Europe 4.50 a year.
Science Club-rates for the United States and Canada (in one remittance):
r subscription r year \$ 3.50

1 sub	scription	1	year	Ø	3.50
2	"	1	year		6.00
3	**	1	year		8.00
4	"	1	year	. 1	0.00

Communications will be welcomed from any quarter. Rejected manuscripts will be returned to the authors only when the requisite amount of postage accompanies the manuscript. Whatever is intended for insertion must be authenticated by the name and address of the writer; not necessarily for publication, but as a guaranty of good faith. We do not hold ourselves responsible for any view or opinions expressed in the communications of our correspondents.

Vol. XIV. NEW YORK, August 9, 1889. No. 340.

CONTENTS:

CONTENTS:									
ELECTRICAL DEVICES OF THE MUTUAL ELECTRIC COMPANY'S SYSTEM THE SPROUTING OF SEEDS AMATEUR PHOTOGRAPHY IN THE SUM-	87 88 93	THE WHAT AND WHY OF AGRICUL- TURAL EXPERIMENT STATIONS 96 ENEMIES OF THE PLANT-LOUSE 100 BOOK-REVIEWS. A Practical Guide to the Climates							
MER OF 1889	94	and Weather of India, Ceylon and Burmah and the Storms of the Indian Seas101 Numbers Universalized: An Ad-							
tion of the Human Body Elimination of Poisons Hygienic Police Regulations in Berlin Sir Spencer Wells on Cremation Notes and News	94 95 95 95 95	vanced Algebra							
EDITORIAL The World's Fair and Men of Science.	96	Mosquitoes and Science E. H. Williams, jun. 103 Queries and Answers							

THE WEEK'S PROGRESS in the preparation for the world's fair in this city in 1892 shows mainly, as is to be expected, in the recommendation, by various commercial and industrial bodies, of persons whom they wish to represent them on the committee of one hundred which the mayor proposes to appoint. So far, no action has been taken by scientific men toward giving suggestions as to the features of the exposition in which they would care to take part; and, while naturally scientific interests are not as keen as those which give the main impulse to the undertaking, it is desirable that the scientific men of the country should be heard from; and we cordially invite a free discussion in the columns of Science of the ways by which the interests of American scientific men may be served best by the exhibition. An accompaniment of every exhibition is a series of scientific congresses. To be sure, such congresses to the number of nearly a hundred will have been held in Paris before the close of the summer; but all questions will not be settled by them, and by the summer of 1892 the scientific men of the world will be ready for further debate.

At the present stage of affairs the discussion of the site is going on vigorously, Governor's Island finding a good many advocates. When there was talk of a world's fair eleven years ago, the witty editor of the then flourishing *Appletons' Journal*, Mr. O. B. Bunce, urged Governor's Island as a site in the following terms: "This island is one of the general government military centres, but we

may assume that Congress or the executive, wherever the power lies, would promptly surrender it for the purpose proposed. The situation is superb. It is nearly at the junction of the Hudson and East Rivers, less than a mile from the Battery, and is equidistant from Brooklyn and New York. It lies directly upon the channel which leads to the sea; is fanned by breezes from the ocean and rivers; is healthful, salubrious, and every way charming. Ships from abroad could land their cargoes for the exhibition at the doors of the structures without a foot of land-carriage. Boats down the Hudson, boats from the East through the Sound, steamers from Southern ports, and lighters from the great railroad-depots at Jersey City, could do the same. A ferry would have to be established at the Battery, where are the termini of the elevated railways, which reach through the city to its uppermost limits, thus giving easy and convenient access from every point; while with ferryboats in addition at points along each river, at Brooklyn, and at Jersey City, the great crowd of visitors could be gathered and dispersed with so little friction and so much comfort as to make this world's fair memorable compared with all others. Those who recollect the fatigue and torment of getting to and from the Philadelphia exhibition must welcome this feature of the prospect with delight; and in all of the exhibitions, so far, the journeyings to and fro have been fatiguing and tedious to a degree almost to overweigh the pleasure derived from the wonders on display. Governor's Island is between sixty and seventy acres in extent, and, as the area of the Philadelphia buildings is over fifty acres, the place may at first thought seem too small. This difficulty can be met by having galleries in the buildings, as was the case in the first Crystal Palace, and by erecting some of the structures over the beach supported by piles. Superb façades could be constructed at the water's edge, facing the harbor and the city, presenting a grand picture to the approaching visitors."

In a recent communication to the Evening Post, Mr. Bunce states that the island is a mile and a quarter in circumference, its shape being elliptical. A building encircling the island at the water's edge (which might rest partly on sea-walls) would be of greater length than the united length of the buildings at the Centennial Exhibition, the dimensions of which were as follows: main building, 1,876 feet; machinery hall, 1,402 feet; art gallery, 365 feet; horticultural hall, 383 feet; agricultural hall, 820 feet; making a total of 4,846 feet, with an average width of about 350 feet. A structure encircling the island 400 feet in width would exceed the capacity of the Philadelphia structures fully fifty per cent, and leave the greater part of the island free for the erection of special buildings by the States or otherwise. Whether the form of building here suggested would be adopted is not yet to be decided, but the figures show that there is considerable room on the island, and engineers might be depended on for a few annexed strips out over the water if need should be. The exhibition is to be held, unless all signs fail; it is to be held in New York as the great commercial centre, made so by its being the most accessible city in the United States; and we now urge on scientific men to take such action as will give due prominence to what they are doing for the world's advancement.

THE WHAT AND WHY OF AGRICULTURAL EXPERIMENT STATIONS.

PROFESSOR W. O. ATWATER, director of the Office of Experiment Stations, of the United States Department of Agriculture, has issued Farmers' Bulletin No. 1 of that office, containing a brief statement of the history, work, and aims of the agricultural experiment stations.

This bulletin is intended as the first of a series the object of which is to give information about the experiment stations and their work by collating results bearing upon special topics, and putting them into brief, clear, practical form for farmers and others